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Membership, Financial, and Operating Status of Cooperative Country Elevators in Oklahoma, 1931-1934

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MEMBERSHIP, FINANCIAL, AND OPERATING STATUS OF COOPERATIVE COUNTRY ELEVATORS IN OKLAHOMA, 1931-1934

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SUMMARY

In a study of 77 farmers' cooperative elevator associations in Oklahoma, it was found that a membership of 100 to 150, with an average of 75 to 80 percent of the members consistently patronizing their own elevator, was important since it reduced the risk of grain volume falling below 100,000 bushels a year - the minimum desired for efficient operation and financial stability.

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This study was started in 1931 under a cooperative agreement between the Division of Cooperative Marketing of the Federal Farm Board, the Oklahoma A. and M. College, and the Farmers National Grain Corporation. The work was continued by the Cooperative Division of the Farm Credit Administration in cooperation with these same agencies. Acknowledgment is made of the assistance of E. J. Bell, Jr., and Wm. J. Hart, who conducted the study for the Cooperative Division during 1931, 1932, and 1933. Acknowledgment is also made of the cooperation of the Oklahoma Grain Growers Association, the Farmers Cooperative Grain Dealers Association of Oklahoma, the Union Equity Cooperative Exchange, and the managers and directors of the cooperative elevators who made available their records for analysis.

Large membership and high membership equity in the elevator business were found to be rather closely associated. Moreover, the percentage of members that patronized their own elevator was greater where the elevator was reasonably successful in a financial way. Of the elevators in which members held an equity of 70 percent or more, 40 percent showed more than 120 member-patrons per elevator as against 17.6 percent for elevators with membership equity of less than 70 percent.

The percentage of elevators making a net income of more than $500 a year was more than twice as large where the number of member-patrons was 75 or more as where the number was less than 75.

Elevators handling a grain volume of 100,000 bushels or more a year showed profits in 80 percent of the cases as against 59 percent of the cases where grain volume was smaller. While 59 percent of the smaller-volume elevators showed some profit, in 84 percent of the instances, the profit was limited to a range of from less than $500 to $2,500. Less than half of the larger-volume elevators were limited to this same range.

Twenty percent or more of current assets in the form of cash accompanied the making of profits from operations in 80 to 95 percent of the cases. On the other hand, smaller cash assets in 33 to 50 percent of the cases characterized elevators which incurred losses.

Receivables equal to much more than 40 percent of current assets were most frequently at the expense of cash on hand, indicated a weak collection policy, and were associated with a high percentage of losses. As an average of all records, current assets consisted of 17 percent cash, 41 percent receivables, 31 percent inventory, and 11 percent investments and other current assets.

Gross profits from side lines large enough to cover 40 percent or more of the elevators' total expenses were highly important in reducing the chances of loss for elevators with less than 100,000 bushels of grain a year. Side-line handling margins averaged from 10 to 15 cents per dollar of sales.

Operating expenses per dollar of sales in 1931 and 1932, when sale prices were low, ranged from 10 to 20 cents for elevators handling less than 100,000 bushels of grain a year, and 3 to 10 cents for elevators handling larger volumes. In 1933 and 1934, after sale prices had advanced, handling expenses of the smaller-volume elevators ran from 5 to 10 cents per dollar of sales, and those of the larger-volume elevators from 2 to 6 cents.

Except under quite favorable price conditions, a gross margin of 5 cents per dollar of sales between cost of sales and sales was necessary to cover the expenses of operation, particularly in the case of elevators handling less than 100,000 bushels of grain a year.

INTRODUCTION

Although not the earliest form of cooperative enterprise among farmers, the cooperative grain elevators have been outstanding as measured by the benefits resulting to members of these associations and to grain producers as a whole, and by the extent of the business involved. In 1935 there was on file in the Cooperative Division information concerning 3,125 active farmers' cooperative grain elevators, as reported by the elevators, of which 84 were in Oklahoma. According to reports of these Oklahoma elevators their total business for 1935 amounted to $11,000,000. These associations had in 1935 a total membership of more than 20,000 grain growers.

According to the history of farmers' elevators, in general, progress toward financial security is especially important during the first 10 to 15 years after organization. Of all the farmers' cooperative grain-marketing organizations that have gone out of business and of which records are available, 85 percent have had a life of 15 years or less, and two-thirds of them had a life of 10 years or less. The approach to financial security has been found to be closely concerned with membership relations, since after all the members are the association and their performance as members determines the volume of business and other factors essential to the success of the cooperative enterprise.

A study of the membership, financial and operating features of farmers' cooperative grain elevators in Oklahoma was begun in 1931. It was hoped to obtain through this study a basis for setting up certain business guides for local cooperative elevators, drawn from the experience of the cooperatives themselves. It was believed that these experiences might indicate especially the benefits to be derived by the management, directors and stockholders from the elevator's audit and records, and the most essential matters to be given attention by directors who seek to actually direct the cooperatives, as according to law they are responsible for doing.

Data were obtained through personal interviews and examination of records of 77 of these cooperative elevator associations, covering the years 1931 to 1934. A total of 217 yearly records were thus analyzed.

At the time the study was completed, in 1935, 66 of the 140 local cooperative elevators in Oklahoma were affiliated with the Farmers Cooperative Grain Dealers Association, a cooperative trade association, and the Union Equity Cooperative Exchange, a regional cooperative grain-marketing association. There were 52 local "stations" affiliated with the Oklahoma Grain Growers Association, another cooperative trade association, and the Farmers National Grain Corporation of Enid, Okla., another regional sales agency. There were thus two cooperative trade associations and the two cooperative grain regionals operating in Oklahoma, with whom most of the cooperative elevators were affiliated. There were, in addition, 22 local cooperative elevators that were independent of any other organization. The distribution

of the three groups at the time of the present survey is shown in Figure 1.

As stated above, grain cooperatives in Oklahoma have a total membership of 20,000 to 23,000. This is equal to 25 percent of the total number of farms in the 30 counties containing cooperative elevators, or 52 percent of the number of wheat farms in Oklahoma according to the 1930 census.2/ On the basis of an average annual grain volume of 139,000 bushels per elevator for the elevators studied, the 140 cooperative elevators in Oklahoma would normally handle 19,000,000 bushels of grain a year. Since the grain handled is mostly wheat, it represents about one-half of the crop marketed. Between 45 and 50 percent of the dollar volume of cooperative business in the ninth district of the Farm Credit Administration, comprising the States of Kansas, Oklahoma, Colorado, and New Mexico, is cooperative grain business. Almost one-third of this grain business is in Oklahoma. Thirty-five to 40 percent of the total number of cooperatives in the State are farmers' cooperative grain elevators.

MEMBERSHIP RELATIONS OF COOPERATIVE GRAIN ELEVATORS

Membership problems are of particular importance in cooperative organizations of all sorts because of the close relationship that exists between a cooperative and its members. In the last analysis, the members constitute the cooperative. Consequently problems concerning the relationship of the members of the cooperative to each other are of great importance. The usefulness of the cooperative to the members and its ability to secure new and desirable members depends, to a considerable degree, on the effectiveness with which it develops realization of important common interests on the part of the members.

A cooperative grain elevator association is an organization of grain farmers formed primarily for the purpose of aiding the members to market their grain more efficiently so that the final returns received by the members will ultimately be larger than they could otherwise expect to receive. The secondary objective of most cooperative elevators in Oklahoma is to handle various supplies such as feed, coal, gasoline, and lubricating oil, so that the members may obtain them under more advantageous terms than would otherwise be possible.

The membership problems of cooperative elevators may for convenience be divided into several groups or classes as follows:

1. Obtaining as members the largest possible proportion, preferably all, of the grain producers who could logically expect to benefit from being members and patronizing the organization.
2. Excluding from membership, or terminating the membership of those who are not in a position to benefit from their membership and patronage of the cooperative.
3. Determining the amount and manner of payment of the financial contribution to be required as a prerequisite to membership.

2/ Fifteenth Census of the United States: 1930. Agriculture II, Southern States.

COOPERATIVE ELEVATORS IN OKLAHOMA

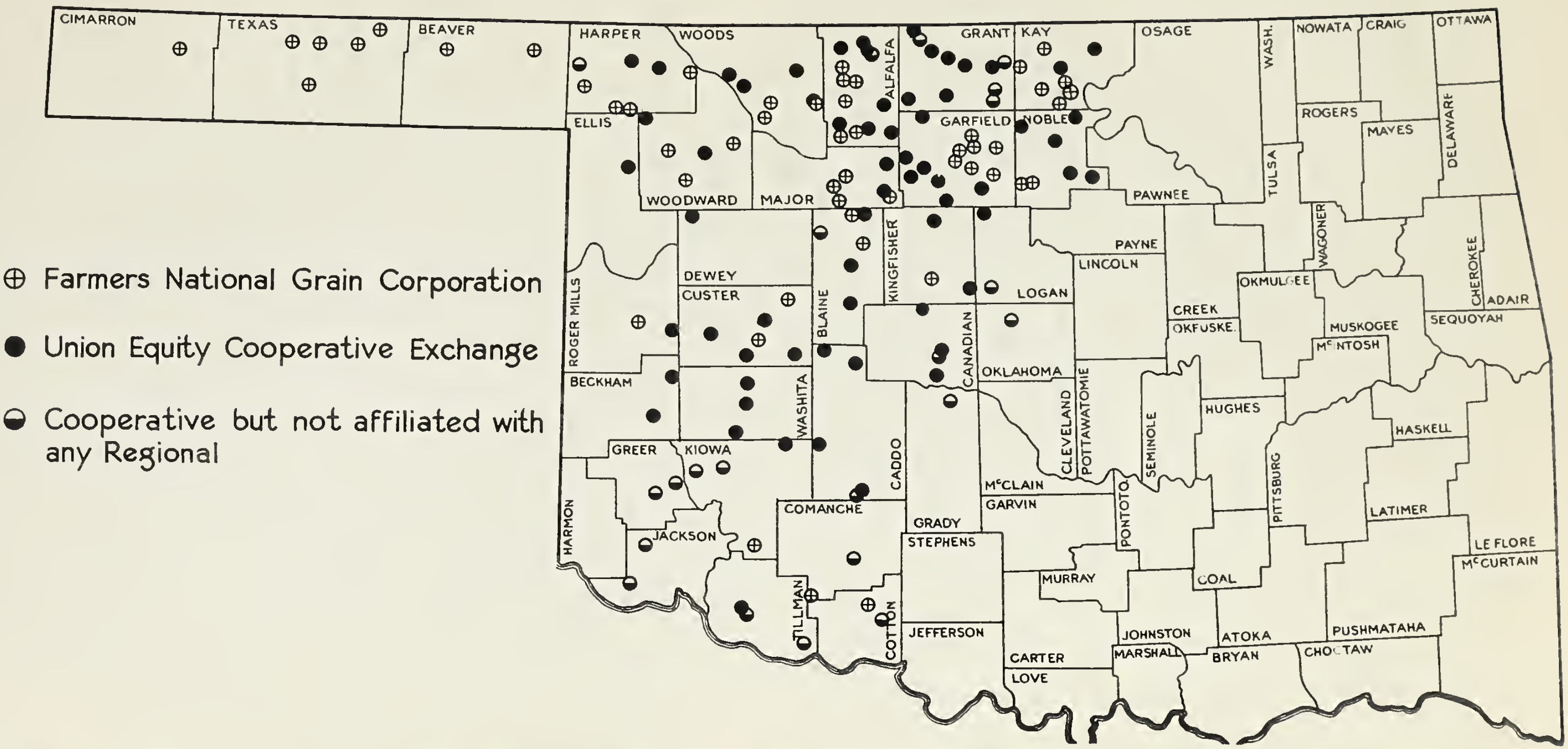

FIGURE 1 - In 1935, there were 140 local cooperative elevators in Oklahoma. Of these 66 were affiliated with the Union Equity Cooperative Exchange; 52 with Farmers National Grain Corporation; and 22 operated independently

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4. Assuring patronage from those who are members.
5. Keeping the members accurately informed concerning all of the affairs and problems of the cooperative.
6. Providing suitable means by which the members can exercise their right and duty of controlling the affairs of the cooperative. This involves such questions as the voting rights of members, the method of holding elections, and the delegation of authority to the board of directors and the manager.
7. Determining the policies to be followed with respect to the sharing of the gains or losses of the cooperative. This involves the method of calculating the dividends to be paid on capital stock and patronage and the method of sharing losses when losses occur.

It is evident that many of these problems can never be completely and permanently solved. For instance, the problem of acquiring and keeping desirable persons as members of a cooperative elevator will surely continue throughout the life of the organization, because of the moving of farmers into and out of the community served by the elevator. The seriousness of the various membership problems as well as the methods of handling them, no doubt, depend to a considerable extent upon the particular circumstances surrounding the individual elevator. The problems may differ considerably for an elevator association which is starting in business for the first time and an old association which has gotten into difficulties because of past mistakes or misfortunes.

Legal Provisions Affecting Membership

The legal situation in which the elevators must operate is important, in some respects, in determining membership policies. Most cooperative elevator associations in Oklahoma are incorporated and operate under what is known as the "cooperative corporations" law of Oklahoma. This law provides for the formation of cooperatives with capital stock, but does not provide for nonstock organizations. Certain detailed provisions of the law as well as certain omissions of material found in cooperative marketing laws of some other States, definitely affect the membership problems of cooperative elevators in Oklahoma. For example, the provisions in the Oklahoma law regarding the eligibility of individuals for membership in cooperative organizations are confined to the single statement that, "No person shall become a shareholder except by consent of the board of directors." 3/ This gives the board power to prevent persons believed to be undesirable from becoming members. However, the law does not set up any standard by which a board of directors may judge the desirability of different persons as members, nor does it compel the board to exercise such authority as it has in selecting members. Neither does the law contain any provisions which compel undesirable members to surrender their stock and cease to be members, although there is nothing in the law which prevents cooperatives from placing provisions in their articles of incorporation or by-laws which

3/ Article XI, Section 165, Corporation Laws of Oklahoma. Oklahoma Statutes, 1931. Sections 98-99

would give the board of directors power over such matters. Observation of the cooperative elevators in Oklahoma indicates that in many cases the boards of directors have done little or nothing toward exercising such powers as they have, relative to the admission of new members. The importance of taking action toward controlling membership varies greatly with the particular circumstances at each elevator, as will be demonstrated later in the study.

A somewhat unusual provision in the Oklahoma law regarding membership states that, "Not more than 5 percent of the stock outstanding at any time, and not more than five hundred dollars in par value, shall be held by or for one person, firm or corporation." The obvious purpose of this provision is to prevent any one person or small group of persons from acquiring such a large financial interest in a cooperative as to result in an undesirable degree of influence in the control of the affairs of the organization. In order to function most successfully, it is apparently essential that the final control of the affairs of a cooperative be placed in the membership generally, and that small groups of members do not acquire too much power in directing the affairs of the organization. Concentration of power frequently leads to dissension among the members and sometimes to the adoption of policies that benefit only a few of the members rather than all of them. However, a limitation of $500 on the amount of stock which may be owned by a member provides a rather drastic limit on the contribution of capital in the form of stock by members and may, in some cases, cause difficulty in raising sufficient funds for the operation of the business. Since the capital needed by local cooperative elevators ordinarily is not large, this limitation probably presents no great difficulty to them, but it may be important to other cooperatives, such as terminal grain sales agencies, wherein the capital requirements per member are larger.

The Oklahoma law provides that each shareholder shall be entitled to one and only one vote at any membership meeting. This is an additional safeguard against undue concentration of control in the hands of a few members. It is a provision frequently followed by cooperatives even where it is not required in the statute under which the association operates. However, some cooperatives prefer to allot the voting rights of members according to the patronage furnished the cooperative by each member. It is not likely that many of the cooperative elevators would adopt a system of voting according to patronage even if the law permitted it, although its use might be advantageous under exceptional circumstances.

Other provisions of the law which affect membership to some extent are those providing that a cooperative cannot sell its stock for less than its par value and that no certificate can be issued for a share of stock until it is fully paid for. Voting by proxy is permitted by the law, provided the by-laws of the cooperative provide for it, but not otherwise. Persons who have subscribed for one or more shares of stock are liable to the cooperative for any unpaid balance of the price of the stock, but are not otherwise liable, as members, for the debts of the cooperative. The law provides that not less than 10 percent of the net earnings during any period shall be set aside in a surplus or reserve fund until the fund equals at least 50 percent of the paid-up capital stock. Also the

cooperative may declare dividends at a rate not higher than 8 percent on the paid-up capital stock and may set aside 5 percent for educational purposes, but the law does not require the cooperative to do either of these things. After other distributions of earnings have been made the remainder must be distributed to the members in proportion to the amount of business done by each member with the cooperative, with the exception that, if the by-laws so provide, part of the net earnings may be distributed to nonmembers, who patronized the association, in proportion to the amount of business each did with the cooperative. The law also provides that at the time of each apportionment of dividends a financial statement showing the business condition of the cooperative shall be prepared and kept on file where it may be examined by the members.

The Oklahoma law, which provides for cooperatives with capital stock, contains no provisions with respect to marketing contracts between members and their cooperative. However, such contracts would be legal if they conformed to the provisions of the statutes relating to contracts and corporations in general. Local cooperative elevators seldom use marketing contracts with their members, so that the omission from the Oklahoma law is probably not of serious importance to them.

When considering the membership problems of the Oklahoma elevators, however, it will be necessary to keep the legal situation in mind, in order to understand the actual conditions and to appraise proposals for improvement.

Membership and Patronage

Membership in 48 Oklahoma cooperative elevators averaged 125 or 147, depending on the type of average used (table 1). Of this membership, 103 to 111 members, or 75 to 80 percent, gave most or all of their grain marketing and supply business to their own elevators. Total elevator sales averaged \$800 to \$900 per member, or \$1,200 to \$1,300 per member-patron (table 1). Sales, however, were swelled by non member business. Seventy percent of the records obtained showed 20 to 50 percent of grain business from non members.

Table 1.-Average membership, patronage, and sales for 47 cooperative elevator associations in Oklahoma, 1934.

Type of average used 1/	Members per elevator association	Member-patrons per elevator association		Sales per member	Sales per member-patron
	Number	Number	Percent	Dollars	Dollars
Arithmetic mean	147	111	75.5	938	1,246
Median	125	103	82.4	836	1,310

1/ Because of the extreme range of the group, the median was more representative.

Sixty percent of the Oklahoma elevators on which records were complete had a membership somewhere between 100 and 200 (table 2). Approximately 23 percent of the elevators had a membership of less than 100, and 17 percent a membership of more than 200.

Table 2.-Membership of 48 cooperative elevator associations, 1934.

Number of members	Elevators having indicated membership	Percentage of total membership in group
	Number	Percent
Less than 100	11	22.9
100 - 149	20	41.6
150 - 199	9	18.8
200 and over	8	16.7
Total	48	100.0

These figures, together with the experience of the southwestern-Kansas area (see pages 11, 12), indicate that a membership of 100 to 150, with at least 73 to 80 percent patronizing their own elevator, is a reasonable goal toward which to work (table 3).

Table 3.-Average membership and patronage for cooperative elevator associations in Oklahoma and Southwestern Kansas for specified years. 1/

Area	Year	Members per elevator association	Members patronizing their own elevator	Percentage of members patronizing their own elevator
		Number	Number	Percent
Oklahoma	1934	146	111	76.0
Southwestern Kansas	1930	155	117	75.5
	1931	150	116	77.3
	1932	149	115	77.2
	1933	159	123	77.4
	1934	149	110	73.8

1/ The data for Oklahoma were based on 47 elevators. That for Kansas on 30 elevators for 1930; 38 for 1931; 41 for 1932; 38 for 1933; and 53 for 1934, as selected for study (See Farm Credit Administration Miscellaneous Report No.8, Membership, Financial and Operating Status of Farmers' Cooperative Elevators in Kansas.)

Member-patrons and Volume of Grain

Number of member-patrons is, of course, closely associated with total volume of grain handled by the cooperative elevator. Those elevators with

a small number of member-patrons that handled a reasonable quantity of grain did so by getting considerable volume of business from nonmembers. In this kind of a competitive situation without the benefit of adequate membership, volumes of grain handled ran lower than for the cooperative elevators whose number of member-patrons was larger (table 4).

Table 4.-Number of member-patrons and bushels of grain handled per elevator, 1934.

Number of member-patrons	Percentage of elevators handling-- Less than 100,000 bushels	100,000 bushels or more	200,000 bushels or more
	Percent	Percent	Percent
1 - 74	70.6	29.4	0
75 - 149	23.8	76.2	28.6
150 and over	37.5	62.5	62.5

Apparently a membership-patronage of 75 to 100 growers per elevator is important in reducing the risk of grain volume falling below 100,000 bushels.

Member-patrons and Net Income

Volume is an important element in the making of income and, as stated above, volume depends largely upon number of member-patrons. It was found that in the group of elevators having 75 or more member-patrons the percentage of elevators making net income was twice as great as in the group having a membership-patronage of less than 75 growers (table 5). Of the elevators with a membership-patronage of 75 or more, 83 percent showed net incomes of more than $500 a year. On the other hand only 41 percent of the elevators whose membership-patronage was less than 75 showed net incomes of more than $500 a year.

Table 5.-Number of member-patrons and net incomes for 47 cooperative elevator associations, 1934.

Member-patrons	Elevators studied	Elevators having indicated net income-- $500 or less a year	Above $500 a year	Percentage above $500 a year
	Number	Number	Number	Percent
Less than 75	17	10	7	41.2
75 or more	30	5	25	83.3
All elevators	47	15	32	68.1

The net income of the cooperative elevators furnishes one measure of their financial success and of the benefits which the member-patrons receive from their organizations. Table 6 shows that the average net incomes per elevator were much larger for the elevators with a relatively large number of member-patrons than for those with a small number. The average net income per member-patron was much smaller for 11 elevators which had less than 60 member-patrons than for the other elevators. For the larger numbers of member-patrons the difference per member-patron and per member was not so wide. The most marked improvement came with raising member-patronage from less than 60 to between 60 and 100 growers. The average net income per dollar of sales was only .56 cents for the elevators with less than 60 member-patrons as compared with 2.07 cents for the elevators with 140 or more member-patrons. The net income per dollar of sales is a significant measure of the financial success of a cooperative elevator because it indicates the amount earned or saved for the member-patrons per unit of business. Apparently those farmers who were fortunate enough to be members of an elevator with a reasonably large number of member-patrons were more likely to receive benefits from the earnings of their elevator, than were the farmers who were members of an elevator with a small number of member-patrons.

As a practical matter, this experience indicates the importance of cooperative elevator directors and managers in this territory setting a minimum goal for membership-patronage of between 60 and 100 growers. A figure of at least 75 to 80 is something definite at which to aim.

Table 6.-Number of member-patrons and net income of 47 cooperative elevators, 1934.

Number of member-patrons	Elevators in group	Average net income-- Per elevator	Per member-patron	Per member	Per dollar of sales
	Number	Dollars	Dollars	Dollars	Cents
Less than 60	11	335	7.68	4.80	.56
60 - 99	12	1,931	24.45	15.95	1.68
100 - 139	14	2,503	21.21	16.82	1.69
140 and over	10	4,829	22.78	18.91	2.07
Average for 47 elevators	--	2,344	21.17	16.07	1.71

Membership Equity

Good financial condition, as measured by membership equity in the business, was found to accompany larger number of member-patrons as a rule. Naturally there were some exceptions, as factors other than membership equity in the business affect number of member-patrons. Likewise, factors other than number of member-patrons and the additional volume of business they bring, affect net incomes, and the ability to build up membership equity. In spite of these facts there was a noticeable difference between number of member-patrons in the elevators with less than 70 percent membership equity in the business, and those with more than 70 percent membership equity

(table 7).

Table 7.-Membership equity and number of member-patrons, 1934.

Equity group	Percentage of elevators having— Less than 70 member-patrons	70-120 member-patrons	More than 120 member-patrons
	Percent	Percent	Percent
Less than 70 percent	47.1	35.3	17.6
70 percent or more	26.7	33.3	40.0

The extent to which members own their cooperative elevator business is frequently taken as a measure of the elevator's success. The percentage that net worth is of total assets indicates the extent of the combined equity of members in the cooperative elevator business. The Oklahoma elevator records studied were more consistent from year to year as to equity grouping than they were as to the making of net income or loss. Only 63.6 percent of the elevators studied consistently showed either a net income or a loss over a 3-year period. About half of them made a net income one year and a loss another. On the other hand 69.7 percent of the elevators remained in the same membership-equity classification over the 3-year period(table 8).

Table 8.-Percentage of elevators consistently showing gains or losses and the percentage consistently falling in the same membership-equity classification, 1932-1934.

State	Elevators studied	Percentage consistently showing gains or losses	Percentage consistently in same membership-equity group
	Number	Percent	Percent
Oklahoma	33	63.6	69.7
Kansas:			
Eastern	36	38.9	77.8
Northwestern	23	52.2	60.9
Southwestern	39	64.1	51.3

In this respect the Oklahoma elevators that were studied resembled those in eastern Kansas, where grain production was not so variable as in southwestern Kansas.

The above results were obtained with the Oklahoma elevators studied, most of which were in Enid, Okla., territory, and a large part of that section is stable wheat-producing territory. Because of almost complete crop failure in parts of western Oklahoma during the 3 years, 1932 to 1934, records of cooperative elevators in that section were not obtained. The fact

that many of the elevators were in the vicinity of Enid, therefore, has an influence on any composite picture presented in this report. Because wheat production in this territory is stable, variations in elevator incomes are not so large, from year to year, as to change frequently the equity position ofthe elevator membership. Consequently, membership equity is a fairly stable credit criterion by which to judge cooperative elevators in a large part of Oklahoma cooperative-elevator territory.

In the lower-membership-equity group, 41 percent of the elevators made net incomes in 1931 and 1932, and in the higher-equity group, 75 percent of the elevators. In the 2 years of better prices, 1933 and 1934, 61 percent of the lower-equity group and 83 percent of the higher-equity group made net incomes (table 9).

Table 9-.Number and percentage of elevators showing net incomes by membership equity groups, 1931-1932 and 1933-1934.

	Elevators having equity of less than 75 percent				Elevators having equity of 75 percent or more			
Period	Total	Elevators showing losses	Elevators showing net incomes	Percentage of elevators showing net incomes	Total	Elevators showing losses	Elevators showing net incomes	Percentage of elevators showing net incomes
	Number	Number	Number	Percent	Number	Number	Number	Percent
1931-1932	34	20	14	41.2	73	18	55	75.3
1933-1934	41	16	25	61.0	69	12	57	82.6

The relative differences in the 1931-1932 period and the 1933-1934 period indicate the increasing difficulty encountered by elevators with larger liabilities in maintaining profits during periods of declining prices such as 1931 and 1932. The additional burden of fixed expense in the face of declining sales measured in dollars puts the lower-equity elevators at a disadvantage.

Fairly stable wheat production in Enid, Okla., territory results in less fluctuation in net incomes than in sections of more unstable production. On the other hand, in more unstable territory, as in southwestern Kansas and western Oklahoma, the wide variations in profits and losses mean that elevators following a policy that maintains relatively high membership equity are not at the same time makers of maximum net incomes.

In other words, in the more stable territory, maximum net income is associated with high membership equity up to 100 percent. In the more unstable territory maximum net income is associated with intermediate membership equity, and smaller profits with the highest membership equity, as well as with low membership equity. As a practical matter this means that membership equity and the amount of loans to be paid out of profits must be given

Table 10.-Financial and operating features by membership equity groups, 1931-1934. 1/

Percentage of membership equity	Elevators studied showing net income	Elevators studied showing loss	Bushels handled	Percentage of membership equity	Ratio of cash to current liabilities	Percentage receivables are of current assets	Ratio of operating costs to gross income	Ratio of cost of sales to sales	Operating expenses per dollar of sales	Percentage of operating expenses covered by gross margin from side lines
	Number	Number	Number	Percent	Ratio	Percent	Ratio	Ratio	Cents	Percent
1931:										
Less than 70	5	10	88,132	56.4	.2	55.8	1.04	.92	13.4	18.0
70 - 89	7	4	91,122	79.0	.5	18.9	.97	.90	8.7	16.4
90 or over	22	4	202,814	99.6	22.5	27.5	.98	.91	7.8	18.2
1932:										
Less than 70	6	9	69,694	55.3	.1	57.0	1.00	.91	11.6	14.5
70 - 89	10	5	88,170	81.8	.7	31.0	.99	.91	10.5	28.2
90 or over	19	6	149,746	98.3	3.6	26.0	.98	.90	9.4	18.3
1933:										
Less than 70	10	9	92,890	63.9	.1	52.2	1.00	.94	7.6	33.1
70 - 89	14	2	110,898	83.1	.4	28.9	.98	.94	6.7	40.7
90 or over	19	6	118,312	99.4	8.5	16.7	.98	.94	6.6	17.4
1934:										
Less than 70	11	7	88,459	64.5	.1	46.4	.99	.95	4.9	21.7
70 - 89	9	2	136,495	81.0	.3	41.5	.99	.95	4.8	62.7
90 or over	19	2	113,964	99.5	4.4	21.0	.98	.95	4.8	23.6

1/ Based on medians.

special consideration in each area.

The differences in financial and operating ratios, as between Oklahoma cooperative elevators having different membership equities, are shown in table 10. With a membership equity of 70 percent or more, the percentage of elevators showing a loss was reduced 50 percent compared with those having less than 70 percent membership equity. Outstanding differences between the groups aside from financial status, such as the grouping itself would give, are: (1) Volume of grain handled; (2) composition of current assets; (3) earnings from sidelines; (4) expenses of operation. Most pronounced differences are in volume, percentage of assets made up of receivables, and in expenses of operation.

INFLUENCE OF ECONOMIC CONDITIONS ON NET INCOME

In interpreting results of this study, it must be borne in mind that the period 1931 to 1934 included a year of declining prices, 1931; a year of extremely low prices, 1932; a year of advancing prices, 1933; and a year of price levels higher than any since 1930. The percentage of elevators making net incomes varied from 63.6 percent in 1932 to 78.0 percent in 1934 (table 11), or from 60.7 in 1932 to 78.6 percent in 1934, in the case of 28 identical elevators (table 12).

Table 11.-Year-to-year variation in percentage of elevators showing net income, 1931-1934.

Year	Elevators studied	Elevators that showed loss	Elevators that showed net income	Percentage of elevators that showed net income
	Number	Number	Number	Percent
1931	52	18	34	65.4
1932	55	20	35	63.6
1933	60	17	43	71.7
1934	50	11	39	78.0
Total	217	66	151	69.6

Table 12.-Year-to-year variation in percentage of 28 identical elevators showing net income, 1931-1934.

Year	Elevators studied	Elevators that showed loss	Elevators that showed net income	Percentage of elevators that showed net income
	Number	Number	Number	Percent
1931	28	9	19	67.9
1932	28	11	17	60.7
1933	28	7	21	75.0
1934	28	6	22	78.6
Total or average	112	33	79	70.5

The Oklahoma wheat crop was approximately 75,000,000 bushels in 1931; 47,500,000 bushels in 1932; 31,500,000 bushels in 1933; and 37,000,000 bushels in 1934. Volume of grain per elevator varied from 127,000 bushels in 1933 to 142,000 bushels in 1931. The year 1932 was the most difficult year for making net incomes for large-volume as well as small-volume elevators (table 13). The greater improvement in 1933 and 1934 relative to

the 1931 status in the case of small volume elevators is due to their proportionately greater reduction in expenses and increased coverage of expenses with side-line profits.

Table 13.-Number and percentage of elevators showing net income, by volume groups, for years 1931-1934.

	Volume less than 100,000 bushels			Volume of 100,000 bushels or more		
Crop Year	Elevators studied	Elevators showing net income	Percentage of elevators showing net income	Elevators studied	Elevators showing net income	Percentage of elevators showing net income
	Number	Number	Percent	Number	Number	Percent
1931	21	7	33.3	31	27	87.1
1932	19	13	68.4	21	13	61.9
1933	23	15	65.2	32	26	81.3
1934	21	15	71.4	27	23	85.2

VOLUME OF GRAIN AND NET INCOME

Seventy-one percent of all elevator records for the 4-year period, 1931-1934, showed net incomes. Elevators handling 100,000 bushels 4/ or more of grain a year showed net income in 80 percent of the cases. Those with less than 100,000 bushels of grain a year showed net incomes in 59 percent of the cases (table 14).

Conditions were such in 1932 as to give large-volume elevators little advantage in the percentage making net incomes (table 13). Leaving out the records for 1932, 84 percent of the large-volume elevators show a net income as against 57 percent of the small-volume elevators (table 15).

Table 14.-Number and percentage of elevators showing net income by volume groups, 1931-1934.

Bushels of grain handled	Elevators studied	Elevators showing loss	Elevators showing net income	Percentage of elevators showing net income
	Number	Number	Number	Percent
Less than 100,000	84	34	50	59.5
100,000 or more	111	22	89	80.2
Total elevators	195	56	139	71.3

4/ For convenience the elevators handling 100,000 bushels or more of grain will be discussed as the larger-volume group and those handling less than 100,000 bushels will be called the smaller-volume group.

Table 15.-Number and percentage of elevators showing net income by volume groups, 1931-1934, omitting 1932 records.

Bushels of grain handled	Elevators studied	Elevators showing loss	Elevators showing net income	Percentage of elevators showing net income
	Number	Number	Number	Percent
Less than 100,000	65	28	37	56.9
100,000 or more	90	14	76	84.4
Total	155	42	113	72.9

While nearly 60 percent of the small-volume elevators made net incomes in spite of their volume handicap, the range of their net incomes was much more restricted than that of the larger-volume elevators (table 16). Eighty-four percent of the small-volume elevators that made net incomes had net incomes of $2,500 or less, and 30 percent had $500 or less. Only 16 percent of the elevators had net incomes exceeding $2,500. On the other hand, 52.7 percent of the large-volume elevators that made a net income made in excess of $2,500 and only 12.4 percent made less than $500.

Table 16.-Range in net income for 139 elevators, by volume groups, 1931-1934.

Net income	Elevators handling less than 100,000 bushels		Elevators handling 100,000 bushels or more	
Dollars	Number	Percent	Number	Percent
0- 500	15	30.0	11	12.4
501-1,000	14	28.0	6	6.8
1,001-1,500	7	14.0	5	5.6
1,501-2,000	3	6.0	12	13.5
2,001-2,500	3	6.0	8	9.0
2,501-3,000	2	4.0	5	5.6
3,001-3,500	1	2.0	6	6.7
3,501-4,000	2	4.0	5	5.6
4,001-4,500	0	.0	9	10.1
4,501-5,000	0	.0	1	1.1
Over 5,000	3	6.0	21	23.6
Total	50	100.0	89	100.0

Because of the limited range in net income from elevators handling less than 100,000 bushels of grain, there appears to be considerable risk in

allowing total liabilities to exceed $10,000 to $12,000. Only 59.5 percent of the Oklahoma cooperative elevators with less than 100,000 bushels made any net income. Of those that did make a net income, only 16 percent had net incomes exceeding $2,500 while 30 percent had net incomes of $500 or less, as stated above. The average net income for those elevators making a net income of from $0 to $2,500 was $837. Even at $1,000 to $1,200 a year, this net income would require 10 to 15 years to liquidate a loan of $10,000 to $12,000. The risk of greater liabilities is apparent. This is especially true if the elevator is in an area where its volume is likely to be consistently below 100,000 bushels.

As changes in cropping systems, increased competition, or both, reduce grain volume per elevator, experiences of older areas with small grain volume become more applicable. Unless cooperative action on the part of growers limit the tendency, an increasing percentage of Oklahoma cooperative elevators are likely to be faced with the problem of small grain volume, because of increased division of available business.

COMPOSITION OF CURRENT ASSETS

Current assets for the period 1931 to 1934 consisted of 17 percent cash, 41 percent receivables, 31 percent inventory, and 11 percent other current assets, as an average for all 217 elevator records. The elevators making net incomes were usually those whose current assets were more than 20 percent in cash, whereas most of the elevators incurring losses were those that had less than 20 percent of current assets in cash (table 17).

Table 17.-Number and percentage of elevators making net incomes, grouped according to cash assets, 1931-1934.

	Group having less than 20 percent of current asets in cash			Group having 20 percent or more of current assets in cash		
Year	Elevators studied	Elevators making net income		Elevators studied	Elevators making net income	
	Number	Number	Percent	Number	Number	Percent
1931	29	14	48.3	23	20	87.0
1932	33	18	54.5	22	17	77.3
1933	35	20	57.1	25	23	92.0
1934	30	20	66.7	20	19	95.0
Total or average	127	72	56.7	90	79	87.8

Current position of the elevators is, of course, the result of net incomes and losses from operations. Those elevators with more than 20 percent of current assets in cash, therefore, naturally were elevators making net incomes in 80 to 95 percent of the cases. On the other hand, from 33 percent to more than 50 percent of the elevators having in cash less than 20 percent of current assets, were elevators incurring losses. As a practical proposition, cash equal to 20 percent or more of current assets is a good sign of ability to make net incomes while a smaller proportion of cash requires that

other sources of strength be found. A large share of loss-making elevators fall in the class having less than 20 percent, as well as some elevators making net incomes.

Likewise, receivables equal to 40 percent or more of current assets were associated with a higher percentage of losses than were receivables equal to less than 40 percent of current assets. Where receivables amounted to much more than 40 percent of current assets it was most frequently at the expense of cash. A weak collection policy that substitutes book accounts for cash in the elevator's assets naturally bears some relation to net income. Consequently there was found to be a fair degree of association between receivables under or over 40 percent of current assets and the making of net incomes or losses. For all small-volume elevator records (less than 100,000 bushels of grain a year) those with receivables of more than 40 percent of current assets showed net incomes in only 44.2 percent of the cases. Of the small-volume elevators with receivables of less than 40 percent of current assets, 73.8 percent showed net incomes. Of the larger-volume elevators, those with receivables of more than 40 percent of current assets showed net incomes in 59.5 percent of the cases, while those with receivables of less than 40 percent of current assets showed net incomes in 91.8 percent of the cases (table 18).

Table 18.-Number and percentage of elevators making net incomes, grouped according to the percentage of current assets in receivables and according to volume, 1931-1934.

Bushels of grain handled	Group having 40 percent or more of current assets in receivables				Group having less than 40 percent of current assets in receivables			
	Elevators studied	Elevators showing loss	Elevators making net income		Elevators studied	Elevators showing loss	Elevators making net income	
	Number	Number	Number	Percent	Number	Number	Number	Percent
Less than 100,000	43	24	19	44.2	42	11	31	73.8
100,000 or more	37	15	22	59.5	73	6	67	91.8

Some of the records obtained for 1933 and 1934 were detailed enough to permit a partial analysis of receivable items. Among these more than 35 percent of the notes receivable were over 2 years old, and managers estimated that of total notes receivable, 75 percent were collectible.

While, on the average, there were more than 150 accounts receivable per elevator, the largest individual account made up 7 to 8 percent of the total owed the elevator. Managers estimated that 25 to 30 percent of the the accounts were more than 2 years old, and that 80 to 90 percent of total accounts receivable were collectible. This seems to indicate why elevators incurring frequent losses are frequently those that have more than 40 percent of their current assets in receivables.

A theoretical distribution of current asset items might be stated, in round numbers, as 20 percent cash, 30 percent inventory, and 40 percent receivables, with other current assets making up the balance. Obviously, if the traditional 2 to 1 ratio existed between current assets and current liabilities, cash and inventory alone would cover current liabilities under the above current asset distribution so that, barring declines in inventory values, forced liquidation of receivables would not be necessary. This may be of considerable importance to cooperatives whose customers are its members. Such a theoretical balance based on experience can only be approximated, of course, because of constant changes in operations, but its value as a guide is borne out by experience. The 20, 30, 40 distribution of current assets, like the 2 to 1 ratio of current assets to current liabilities, is another basis for interpreting the annual audit of the cooperative elevator. It is particularly significant as a period of price recession threatens.

EARNINGS FROM SIDE LINES

The principal side lines handled by the Oklahoma cooperative elevators from which records were obtained, were general merchandise items, coal, flour, and feed. Some were taking on gas and oil products. Other side lines being handled included posts, seeds, cream, poultry, eggs, livestock, implements, lumber, hay, twine, salt, potatoes, paint, and in one case, cotton.

Elevators whose gross gains from side lines were large enough to cover 40 percent or more of their total expenses of operation were, in a high percentage of cases, making net incomes, especially elevators with less than 100,000 bushels of grain volume a year. The influence of gross gain from side lines on the making of net incomes by larger-volume elevators was less pronounced (table 19). Nearly 80 percent of the large-volume elevators made a net income, even where side lines were of less importance.

Table -19. Percentage of elevators showing net incomes, grouped according to gross gains from side lines, and according to volume, 1931-1934.

	Gross gains from side lines covering 40 percent or more of expenses				Gross gains from side lines covering less than 40 percent of expenses			
Bushels of grain handled	Elevators studied	Elevators showing loss	Elevators showing net income		Elevators studied	Elevators showing loss	Elevators showing net income	
	Number	Number	No.	Pct.	Number	Number	No.	Pct.
Less than 100,000	24	4	20	83.3	60	31	29	48.3
100,000 or more	30	3	27	90.0	78	16	62	79.5

gross margins from side lines averaged for the 2 years, 1933 and 1934, 14.5 and 11.3 percent of sales, respectively. Apparently, margin on side

lines averaging at least 10 to 15 percent of sales is important in reducing the number of cases of loss, particularly in periods of adverse economic conditions, such as the years 1931 and 1932 (table 20).

Table 20.- Gross gains from side lines and percentage of elevators showing losses, 1931-1934.

	Gross gains from side lines amounting to 13 percent or more of sales			Gross gains from side lines amounting to less than 13 percent of sales		
Year	Elevators studied	Elevators showing loss		Elevators studied	Elevators showing loss	
	Number	Number	Percent	Number	Number	Percent
1931	24	7	29.2	28	11	39.3
1932	28	6	21.4	20	10	50.0
1933	29	6	20.7	26	9	34.6
1934	22	5	22.7	25	4	16.0
All years combined	103	24	23.3	99	34	34.3

Side-line sales averaged 18 to 19 percent of total sales, while 39 to 40 percent of total gross profit came from side lines. The margin on side lines averaged between 10 to 15 cents per dollar of sales, as compared with approximately 5 cents on grain sales.

Merchandise sales constituted 59 percent of total side-line sales and showed average margins of 9 to 13 cents per dollar of sales (table 21). Coal sales made up 6 to 9 percent of total side-line sales with a margin of 16 cents per dollar of sales. Feed and flour sales made up 3 to 5 percent of side-line sales and yielded a gross margin of 8 to 11 cents per dollar of sales.

Sales of gas and oil products constituted approximately 10 percent of total side-line sales. They yielded an average gross margin of 21 cents per dollar of sales. Gas and oil products sales ran about 85 percent gasoline sales, 5 percent kerosene sales, and 10 percent oil and grease sales. Sales of miscellaneous products mentioned above constituted close to 20 percent of total side-line sales. The average gross margin for these items was 12 to 16 cents per dollar of sales.

The chances for loss for elevators with less than 100,000 bushels of grain a year are greatly reduced where enough side lines are handled to yield a gross gain equal to 40 percent of the total expense account.

Table 21.-Composition of side-line sales and gross margin per dollar of sales, 1933 and 1934.

Side line	Percentage of total side line sales		Margin per dollar of sales	
	1933	1934	1933	1934
	Percent	Percent	Cents	Cents
Merchandise	59.5	58.9	13.0	9.4
Coal	8.9	6.3	16.1	15.6
Feed and flour	4.7	3.3	11.0	7.7
Gasoline and oil	10.2	9.3	21.2	21.0
Miscellaneous	16.7	22.2	15.9	11.8
	100.0	100.0	--	--

EXPENSES OF OPERATION

Total operating expenses of elevators with less than 100,000 bushels of grain per year ran from 10 to 20 cents per dollar of sales in 1931 and 1932 when sales prices were low. Expenses of the elevators with 100,000 bushels or more ran from 3 to 10 cents per dollar of sales for the most part. In 1933 and 1934 after sales prices had advanced, expenses of the small-volume elevators ran from 5 to 10 cents per dollar of sales. For the larger-volume elevators expenses were from 2 to 6 cents per dollar of sales (see figure 2).

In 1931 and 1932 from 70 to 80 percent of the elevators with less than 100,000 bushels of grain a year showed expenses of more than 10 cents per dollar of sales. During the same period 70 to 80 percent of the larger-volume elevators showed expenses of less than 10 cents per dollar of sales (table 22). In 1933 and 1934, 76 and 57 percent respectively of the smaller volume elevators showed expenses of more than 6 cents per dollar of sales, while from 57 to 92 percent of the larger-volume elevators showed expenses of less than 6 cents per dollar of sales (table 23).

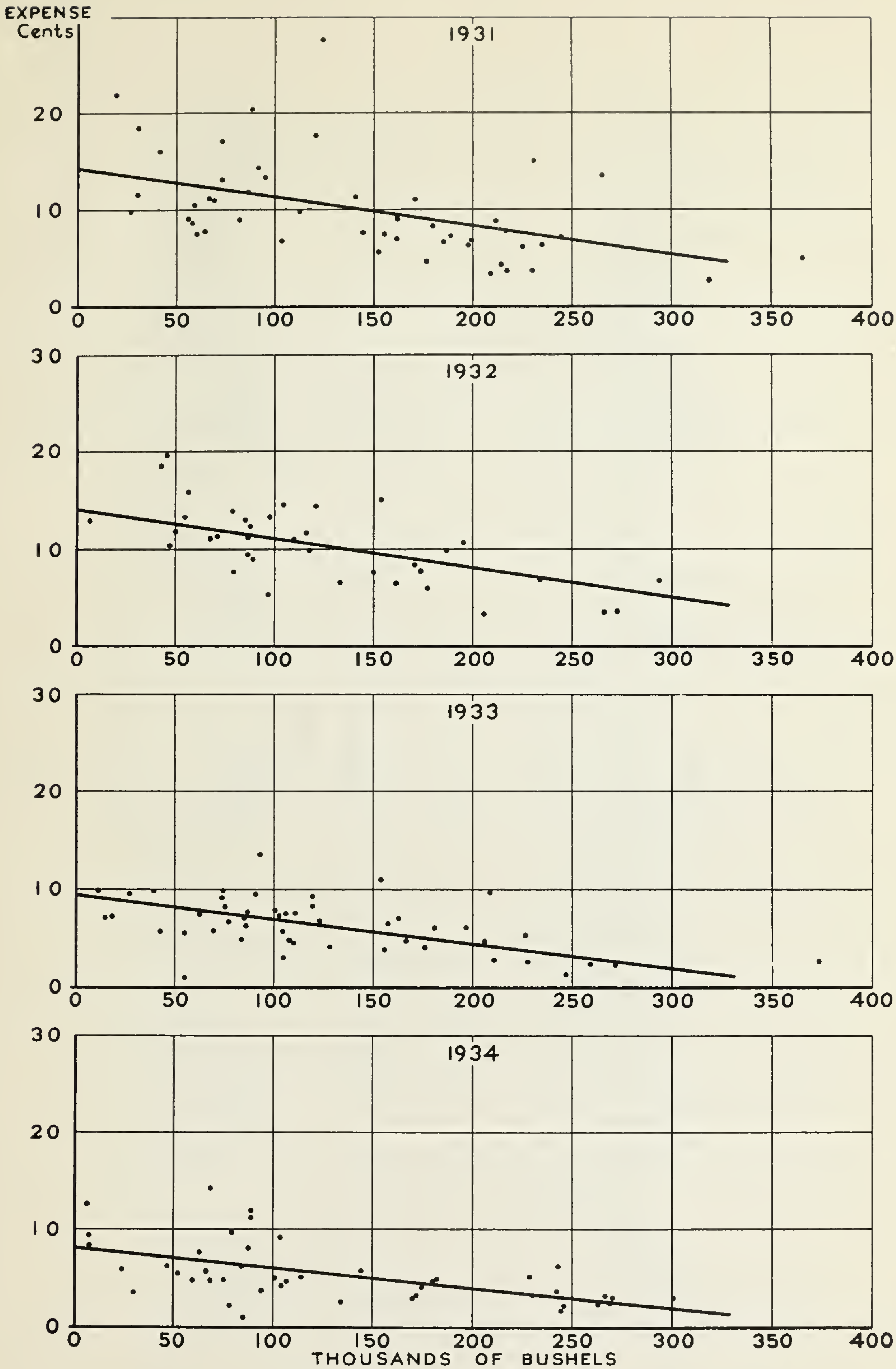

FIGURE 2. - VOLUME OF GRAIN HANDLED AND OPERATING EXPENSES PER DOLLAR OF TOTAL SALES, 1931 - 1934

In 1931 and 1932 when grain prices were low, total operating expenses of elevators handling less than 100,000 bushels of grain ran from 10 to 20 cents per dollar of sales, and those of elevators handling 100,000 bushels or more ran from 3 to 10 cents per dollar of sales. In 1933 and 1934 after prices had advanced, expenses of the small-volume elevators ran from 5 to 10 cents per dollar of sales and those of the larger-volume elevators, from 2 to 6 cents.

Table 22.-Volume of grain handled and expenses, 1931 and 1932.

Year	Less than 100,000 bushels handled			100,000 or more bushels handled		
	Elevators studied	Elevators with expenses of 10 cents or more per dollar of sales		Elevators studied	Elevators with expenses under 10 cents per dollar of sales	
	Number	Number	Percent	Number	Number	Percent
1931	21	15	71.4	31	25	80.6
1932	19	15	78.9	20	14	70.0

Table 23.-Volume of grain handled and expenses, 1933 and 1934.

Year	Less than 100,000 bushels handled			100,000 or more bushels handled		
	Elevators studied	Elevators with expenses of 6 cents or more per dollar of sales		Elevators studied	Elevators with expenses under 6 cents per dollar of sales	
	Number	Number	Percent	Number	Number	Percent
1933	21	16	76.2	30	17	56.7
1934	21	12	57.1	24	22	91.7

Except under quite favorable price conditions a gross margin of 5 cents per dollar of sales between cost of sales and sales is necessary to cover expenses of operation (table 24). This is particularly true for elevators that consistently handle less than 100,000 bushels of grain a year.

Table 24.-Percentage of elevators with expenses of less than 5 cents per dollar of sales, by volume groups, 1931-1934

Year	elevators studied	Elevators handling indicated volume: Less than 100,000 bushels	Elevators handling indicated volume: 100,000 to 200,000 bushels	Elevators handling indicated volume: 200,000 bushels or more	Percentage of elevators studied having expenses of less than 5 cents per dollar of sales	
	Number	Number	Number	Number	Number	Percent
1931	52	0	1	5	6	11.5
1932	39	0	0	3	3	7.7
1933	51	2	7	8	17	33.3
1934	45	7	8	10	25	55.6
All years combined	187	9	16	26	51	27.3

OPPORTUNITIES FOR FURTHER COOPERATIVE EFFORT

As pointed out earlier (page 4) membership in local cooperative elevators in Oklahoma is estimated to equal 25 percent of the total number of farms in cooperative elevator territory. This membership is equivalent to about 52 percent of the total number of wheat farms reported by the 1930 census. The present study indicates that, on the average, 75 to 80 percent of the members of cooperative elevator associations consistently patronize their own elevator. On the average, approximately 70 percent of the local elevator's business comes from members, and 30 percent from nonmembers. The percentage from nonmembers varied from less than 5 percent to 75 percent.

Available reports indicate that as an average for the group, these cooperative elevators shipped out 58 percent of the cars of grain shipped from their local stations. This checks reasonably well with an earlier estimate that about half of the local grain crop was marketed cooperatively (page 4).

The cooperative elevator records showed that 72 percent of their cars were consigned to cooperative sales agencies at terminal markets, 20 percent to other grain companies, and 8 percent to mills.

Cooperative sales agencies at Enid have handled during the last 2 years a volume of grain equal to 71 percent of the estimated quantity handled by local cooperative elevators during the same period. These cooperative sales

agencies, in turn, have marketed approximately 40 percent of their grain through the national sales agency, the Farmers National Grain Corporation.

It is thus clear that there is still room in this territory for the extension of cooperative grain marketing through the promotion of the best of accumulated standards of cooperative experience. Horizontal integration of growers' interests in marketing their grain has been carried to a point where cooperatives originate about half of the crop movement. Vertical integration is at a stage where there is still considerable leakage of cooperatively originated grain into noncooperative channels before final sale to mills. This is partly compensated for, as to volume, through the handling by cooperative terminal sales agencies of some grain that does not originate cooperatively.